

## Pharmacy Programs & Evaluations

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## Positive Deviants for Medication Therapy Management: Behaviors and Delivery Strategies that Distinguish the Highest Performing Community Pharmacies

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### ABSTRACT

**Introduction:** Community pharmacies are incentivized to positively influence Medicare Prescription Drug Plans' (PDPs) Star Ratings through inclusion in PDPs' preferred pharmacy networks. Although a wide range of measures are used in determining Star Ratings, strategies for optimizing MTM delivery performance relevant to Star Ratings' measures have not been identified.

**Objectives:** Using widely accepted MTM quality measures, the objectives of this study are to (1) apply the Positive Deviance model to identify high performing community pharmacies (2) characterize key indicators differentiating "high performing" community pharmacies and (3) generate hypotheses for best practices pertaining to MTM delivery.

**Theoretical framework:** The proposed work incorporates two complementary conceptual frameworks. First, adapted for MTM, the Positive Deviance model will be applied to identify community pharmacy locations with variable performance on MTM quality measures. Second, the Chronic Care Model will be applied as a framework for data collection and analysis because MTM services focus primarily on optimizing health outcomes among the chronically ill.

**Proposed methods:** We will categorize pharmacy locations within a supermarket-community pharmacy chain into quintiles according to a set of Pharmacy Quality Alliance MTM quality measures: Adherence Measures (cholesterol, hypertension, and diabetes medications), High Risk Medications in the elderly, and Comprehensive Medication Review completion rates.

Using purposive sampling, pharmacy staff engaged in MTM delivery at the top, intermediate, and lowest performing quintiles will be approached to participate in semi-structured interviews to characterize perspectives and experiences related to the provision of MTM services. Using an iterative process throughout data collection, study investigators will conduct a thematic analysis of interview data collected. Primary outcome measures will include key findings identified during interviews pertaining to areas of overlap and variation in practice for MTM. Key findings will be synthesized to inform hypotheses defining best practices and intervention strategies for improving MTM quality measures.

**Key Words:** Medication Therapy Management (MTM), Best practices, Positive Deviance, Pharmacy Quality Alliance (PQA) measures

## Establishing Community Pharmacy Links to Clinic Electronic Medical Records (EMRs)

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### ABSTRACT

**Objectives:** The objective of this study was to identify key facilitators and obstacles to community pharmacists connecting to a clinic EMR. Such links could improve coordination of care between clinics and pharmacies, while creating efficiencies in communications.

**Methods:** Six sites in Iowa were identified to have established a pharmacy link to a clinic's electronic medical records. The six sites were contacted, and six pharmacists and two clinic personnel agreed to conduct a telephone interview. Informants were asked about benefits, facilitators and obstacles in establishing the connection. Interviews were transcribed and coded to generate a case report for each site. From these data, an EMR guide was developed to facilitate future establishment of EMR connections between community pharmacies and clinics.

**Results:** Each interview lasted between 30-50 minutes. The participating pharmacies included traditional community pharmacies (N=4), long term care facilities (N=1), and a centralized pharmacist-run disease management service (N=1). The two clinicians are employed at a large medical center and primary care clinic. Reported benefits of an EMR connection included improved pharmacist recommendations on medication therapy, time saved, and identified/resolved adverse drug events (ADEs). Facilitators included involving a smaller clinic with limited hierarchy. A champion within the clinic, often a provider or nurse, also promoted the value of linking a pharmacist to the EMR. Obstacles included convincing clinic administrators the value of the connection exceeded potential risks, technology concerns, and difficulty in accessing decision makers in healthcare systems.

**Conclusions:** The healthcare system is searching for efficient ways to improve patient outcomes. One solution is improving the interconnectivity between clinics and community pharmacies through EMR access. This relatively low-cost link has shown preliminary benefits such as resolved or prevented ADEs, better recommendations for patients and improved physician-pharmacist relationships.

**Key Words:** Electronic Medical Records, EMRs, Interconnectivity, Community Pharmacy

## Error Types with Use of Medication-Related Technology: A Mixed Methods Research Study

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### ABSTRACT

**Introduction:** Contrary to the expectation of safe healthcare with technology, incorporating and utilizing healthcare technology not only fails to completely eliminate error, but also gives rise to new ones.

**Objective:** To assess the specific nature of errors associated with incorporation of two different technologies, e-prescribing and automated dispensing cabinets, into pharmacists' daily work. **Methods:** Data transformation techniques were used on a pre-existing database to which pharmacists reported safety issues in the form of *errors prevented* and *errors observed* because of two healthcare technologies becoming introduced into their practice: e-prescribing and automated dispensing cabinets (ADCs). These *in vivo* descriptive text responses were converted into error data categories. Quantitative analysis of categories was then performed to inform our understanding of the specific error types for each healthcare technology.

**Results:** There were four types of errors eliminated with the introduction of e-prescribing into practice, three new error types emerged due to the use of e-prescribing, and three error types that persist regardless if e-prescribing initiated. With ADC use, there were four types of errors eliminated, emergence of three new error types, and three error types that persisted regardless of ADC use being introduced.

**Conclusions:** There are new error types arising due to use of technology and persistent error types that exist with or without use of technology. We need to shift our paradigm of inquiry to focus on local and specific safety risks generated by each technology individually to determine the optimal approach to risk reduction with each unique technology introduced.

**Implications:** A "technology-type of error" relationship needs to be established in the healthcare industry for each technology. Instead of devising general guidelines for efficient use of technology, greater attention needs to be paid to the safety generated with use of specific medication related technology and address risks, if any.

**Key words:** Patient safety, medication errors, healthcare technology, e-prescribing, automated dispensing

## Satisfaction and Prevalence of Plan Switching for Individuals Utilizing a Pharmacy Medicare Part D Consultation Service

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### ABSTRACT

**Objectives:** There are a large number of Medicare Part D plans, making it difficult for patients to choose the optimal plan. This study evaluates 1) patient satisfaction with a pharmacy Medicare Part D consultation service and 2) plan-switching tendencies of individuals who utilized the service compared to those that did not.

**Methods:** The study took place at a single, independently owned community pharmacy. Patients received free individual consultations with a pharmacist that included a medication review and information on all available Part D plans. Individuals were selected to receive the service using pharmacy software to identify potential inefficiencies in current Part D plans. Data on satisfaction and perceived pharmacist role in providing Medicare Part D information were collected via an anonymous, in-person survey administered at the pharmacy. A comparison group of all 849 Medicare Part D beneficiaries who used the pharmacy but did not receive the service was included. 2017 and 2018 dispensing data were evaluated to determine prevalence of plan switching. Logistic regression was used to evaluate statistical significance of the effect of service utilization on plan switching rates.

**Results:** Of the 318 patients identified, 79 used the consultation service. The Part D plan switching rate was 43% for patients who used the service and only 4% for those who did not use the service. Use of the consultation service had a statistically significant positive effect on switching ( $p$ -value  $<0.05$ ), controlling for patient age and gender. Patients generally were satisfied with the service (mean item score of  $4.73 \pm 0.451$  with 5 being the highest satisfaction level). Open-ended responses revealed patients utilize a variety of “helpers” for plan information and decisions.

**Conclusions:** Utilization of the pharmacist-led Part D consultation service increased Medicare Part D plan switching with the majority of individuals reporting high satisfaction.

**Key Words:** outcomes, Medicare, satisfaction, plan switching

## Prevalence of Fall-Risk Increasing Drugs Use among Community Dwelling Older Adults

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### ABSTRACT

**Background:** Fall is a common and major health problem in the United States. With around 30% of older adults (aged  $\geq 65$  years) report falling at least one time in a year, falls cause severe injuries, hospitalization, death and substantial medical cost as high as 50 billion estimated in year 2015. and death among older adults. Using fall risk-increasing drugs (FRIDs) is an important risk factor for falling among older adults, and FRIDs include drugs across various therapeutic categories that can cause sedation, orthostatic hypotension or impaired cognition, and blurred vision.

**Objectives:** This study aims to investigate the prevalence of FRID use among community-dwelling older adults enrolled in Medicare in United States. Also, this study attempts to investigate the characteristics of users taking FRIDs.

**Proposed Methods:** This cross-sectional study will be conducted using 2013 Medicare Current Beneficiaries Survey file. Only older adults aged 65 and older living in community setting will be included. Medication with therapeutic categories classified as FRIDs will be identified from the Prescribed Medicine Event file. We will first use descriptive statistics to report the type and frequency of FRIDs prescribed. Secondly, we will calculate the number of different FRIDs prescribed simultaneously per person. Thirdly, we will compare the differences in the demographic characteristics (i.e., age, sex, race), alcohol consumption, health status measures (i.e., self-reported health, chronic conditions), as well as frequency and severity of falling across older adults with different types of FRIDs and with different numbers of FRIDs during the study period.

**Key Words:** Fall-risk increasing drugs, Falls, Medicare, Older adults

## Integration of a Fall Risk Assessment Model into Community Pharmacist Workflow

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### ABSTRACT

**Objectives:** Every year, older Americans experience approximately 29 million falls causing seven million injuries and costing an estimated \$31 billion in Medicare costs. Majority of falls can be prevented through a fall risk assessment in the outpatient setting, yet effective implementation of these assessments remains a substantial challenge. Community pharmacists are uniquely qualified and positioned to screen patients at risk for a fall; however, both the readiness and the level of participation in fall risk assessments by community pharmacists is currently unknown. The objectives of this study are twofold: 1) examine current practices of falls risk assessment in community pharmacies, and 2) identify barriers and facilitators to integrating a falls risk assessment model into workflow.

**Methods:** Comprehensive interviews are being conducted with community pharmacists practicing in Iowa and Wisconsin. Grounded theory is guiding data collection and analysis. A workflow model will be constructed from interviews that may guide future practices. Results: To date, 12 pharmacists have completed interviews including nine pharmacists from independent pharmacies and three pharmacists from large retail settings. Ten pharmacists identified screening for high risk medications related to falls as a priority for their practice. Other falls risk screening components are not routinely performed. Barriers to conducting a falls risk assessment include lack of: time, space, staff training, patient education materials, and partnerships with local providers.

**Discussion/Conclusions:** Findings from this study will provide important insight into factors that may influence integration of falls risk assessments into community pharmacies. The creation of a fall risk assessment model from this study will provide a valuable resource to facilitate patient care delivery. Integration of fall risk assessments into community pharmacist workflow may expand pharmacist roles thus supporting and highlighting the importance of community pharmacy practice in the health care delivery system.

**Key Words:** Fall Risk, Community Pharmacy, Pharmacist Workflow